UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,931	12/31/2003	Dilip G. Saoji	U 013963-9	6678

140 7590 11/18/2005

LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NY 10023

EXAMINER	
JOHNSEN, JASON H	

ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/749,931	SAOJI ET AL.	
	Examiner	Art Unit	
	Jason H. Johnsen	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-10,12,14,15,22-27 and 30-39, 42-44* is/are rejected.

7)☐ Claim(s) *11,13,16-21,28,29,40 and 41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *N/A* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on August 18, 2005 has been received, entered and carefully considered. The amendment affects the instant application accordingly:

(A) Comments regarding office action have been provided drawn to:
- (i) Claim objection of claims 13, 16-21, 25, 28, and 29, which is maintained for reasons discussed below. Additionally, claims 11 and 40-41 are added to the claim objection as necessitated by amendment;
- (ii) 102(e) rejection of claims 11 and 12 by de Souza et al., which has been withdrawn in view of applicant's amendments;
- (iii) 103(a) rejection of claims 1, 4, 5, 7, 8, 9, 23, 24, 26, 27, and 30 by Schulz et al, which has been withdrawn in view of applicant's amendments;
- (iv) 112, 1st paragraph rejection of claim 7, which has been withdrawn in view of applicant's amendments;
- (v) 112, 2st paragraph rejection of claims 7, 8, 24, and 30, which has been withdrawn in view of applicant's amendments;
- (vi) 102(e) rejection of claims 1-10, 12, 14, 15, 22, 23, 24, 25, 26, 27, and 30-35 by de Souza et al, which is maintained for reasons discussed below. Additionally, 102(e) rejection of newly added claims 36-39, and 42-44 by de Souza et al, is newly cited and necessitated by amendment.

2. Claims 1-44 are pending in the case.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Maintaining 102(e) rejection

Applicant's arguments filed on August 18, 2005 have been fully considered but they are not persuasive for the following reason(s): Applicant argues that the de Souza et al. patent discloses a substantially crystalline form and amorphous forms of the arginine salt of a benzoquinolizine-2-carboxylic acid, but does not disclose the pharmaceutical formulation as claimed by Applicant that is suitable for different uses such as for parenteral administration. Further, Applicant argues that the reference fails to show certain features of applicant's invention, specifically, "a therapeutically or prophylactically effective drug concentration that is

above the practical limit of solubility of the drug in a substantially isotonic aqueous solution at a physiologically compatible pH and use of a) a pharmaceutically acceptable solubilizing agent selected from a basic amino-acid, a cyclodextrin, a cyclodextrin polymer or derivative thereof or a mixture thereof in a concentration sufficient to maintain the drug in solution at a drug concentration that is above the practical limit of solubility of the drug in a substantially isotonic aqueous solution at a physiologically compatible pH." In response, de Souza et al. does teach the arginine salt as a component in a pharmaceutical formulation in a concentration sufficient to maintain the drug in solution at drug concentration that is above the practical limit of solubility of the drug in a substantial isotonic aqueous solution at a physiologically compatible pH, which is suitable for different uses such as parenteral administration. (See abstract-"process for their preparation and pharmaceutical formulations which comprise those arginine salt forms as the active ingredient for its use in treating antimicrobial infections." See column 5, lines 24-28; column 8, lines 22-48; column 1, lines 50-53, and Column 2, lines 29-56). In the specification Applicant discloses the features of their allegedly novel formulation. Applicant teaches that solutions of benzoquinolizine carboxylic acids that reduce vein irritation and even phlebitis and are suitable for administration to humans have not been reported in the literature. Applicant discloses in the specification on page 7 that the reported literature "failed in respect of providing a solution with one or more of the following requirements such as being devoid of phlebitogenic properties, free of abnormal toxicity, in remaining sufficiently stable, or for utility as a marketable parenteral drug." Applicant goes on to teach that their invention is based in part on the establishment that addition of an amount of amino acid, in particular of the amino acid arginine, in a prescribed range provides to a "surprising degree" a solution with a) increased

solubility of benzoquinolizine-2-carboxylic acid, b) lowered potential to induce phlebitogenicity, c) fulfilling the abnormal toxicity regulatory requirements, and d) stability when stored for an extended period at specified temperature and humidity ranges. However, de Souza et al. teach benzoquinolizine carboxylic acid salts of arginine that have favorable aqueous solubility, more stability when stored for extended period of time, favorable acute toxicity values, a low propensity to cause phlebitis and a reduction in venous inflammation, which can be administered in various forms, including parenterally (See column 2, lines 47-60; column 8, lines 27 and lines 34-48). Regarding newly cited claims 36-39, 42-44, the pharmaceutical formulations as taught by de Souza et al. are used to treat a bacterial infection in the dosages and amounts taught by Applicant as argued in the office action dated February 16, 2005.

Allowable Subject Matter

The subject matter found in claims 11, 13, 16-21, 28, 29, and 40-41 would be allowable if rewritten in independent form. A pharmaceutical composition comprising a benzoquinolizine-2-carboxylic acid drug, and a pharmaceutically acceptable solubilizing agent wherein the benzoquinolizine drug is an acid 0.2 hydrate of claim 11, comprising .1% to about 1.0% by weight of claim 13 or where the solubilizing agent is a cyclodextrin or cyclodextrin derivative of claims 17 and 18 is not taught nor fairly suggested in the prior art. The additional limitations of claims 19-21 further defining the solubilizing agent, the specific daily doses of claims 28, 29, 40 and 41 are also seen to be free of the prior art.

Summary

Claims 1-10, 12, 14, 15, 22-27, and 30-39, 42, 43, 44 are rejected. Claims 11, 13, and 16-21, 28, 29, 40, 41 are objected to be would be allowable if rewritten in independent form.

Conclusion

THIS ACTION IS MADE FINAL as necessitated by amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jason H. Johnsen** whose telephone number is **571-272-3106**. The examiner can normally be reached on Mon-Friday, 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason H. Johnsen
Patent Examiner
Art Unit 1623

James O. Wilson
Supervisory Patent Examiner
Art Unit 1623